
CASES OF ANEURISM.

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WITH AN ENGRAVING.

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CASES OF ANEURISM.

THE following cases, excepting the last, have occurred to me within the last five or six weeks, together with a few other interesting ones, which I may afterwards present to the public.

I am induced to offer the first, both on account of the singularity of the circumstances attending it, as well as of the operation which was successfully performed for its cure. The other four cases, besides affording additional proof of the superior efficacy of the single ligature over all other plans in the securing of arteries, contain also some other points worthy of attention.

CASE I.

Ossified Aneurismal Tumour of the Subscapular Artery.

ROBERT M'NAIR, æt. 16, was admitted into the Royal Infirmary of Edinburgh on the 7th of November 1819, on account of a tumour over the left scapula. His case was the subject of a full consultation of the surgeons of that Institution. It being deemed by them imprudent, and not advisable, to attempt any operation, he was, after the application of leeches, dismissed as incurable at the end of eight days.

On the 15th, the young man was sent to me by my friend, Mr Walker, surgeon, to whom he had applied. On examination, I found the tumour very large, rendering him, as it were, hunch-backed; hard, and inelastic; firmly fixed to the left scapula, and extending from the spine over all its lower surface. It stretched into the axilla, likewise, to within half an inch of

the nerves and vessels, and a large branch (the subscapular) could be felt creeping along its under surface. The arm hung by his side, quite useless, and, from the wasting of the muscles, not more than half the size of the other. The uneasiness produced by the tumour was trifling, according to his account, when compared with the shooting and excruciating pains of the extremity. I was led to imagine that some bony spiculæ extended into the substance of the swelling, from feeling, in my attempts to move it independently of the scapula, a good deal of crepitation, as if of pieces giving way.

The disease was first perceived three months ago, immediately below the spine of the bone, about the size of a filbert, but of a flatter form, and had, of late, increased rapidly. About ten days before his admission into the Infirmary, it had been punctured by a surgeon in Kinross, when nothing but blood escaped.

It was evident from the rapid growth, and other circumstances attending the case, that the boy would soon be destroyed, unless an operation were attempted. On considering the case with my friend Dr Sanders, (whose able advice and assistance I have frequently experienced,) and examining it in all its relations, we were convinced—1st, By the freedom of respiration, that the ribs and intercostal muscles, of course the vital organs in the thorax, were sound; 2dly, That, though the tumour was firmly fixed to the scapula, yet that the bone was equally moveable as the one on the opposite side; and, as the vessels and nerves in the axilla were wholly unconnected with the disease, I immediately made up my mind to remove it; and, if it could not be avoided, to sacrifice the greater part of the scapula also.

Next day, accordingly, I proceeded to the operation, in a small badly-lighted room. I began by making an incision of a foot long at least, from the axilla to the lower and posterior part of the tumour. The latissimus dorsi was then cut across at about two inches from its insertion, so as to expose the inner edge of the swelling, with a view to tie the subscapular in the first instance. In this I was foiled, owing to its depth, as it passed under the lower edge of the tumour, out of the reach of my fingers. I then proceeded, as is my custom, in the extirpation of tumours, to dissect, where I expected vessels to enter from the supra-scapular. With this view, in detaching it from the spine of the scapula, I felt my finger and knife dip into the body of the tumour. This was attended with a profuse gush of coagula and florid blood. I immediately thrust my sponge into the cavity, so as nearly to command the hæmorrhagy. One of

my assistants, at the same time, tried to compress the subclavian, but to no purpose, as the shoulder and arm were much raised to facilitate the dissection in the axilla, which circumstance increased the difficulty of commanding the vessel on the left side. The patient, who had borne the operation well, exhausted by this, and the loss of blood from the very large vessels, supplying the tumour, divided in the former incisions, after some efforts to vomit, now dropped his head off the pillow, pale, cold, and almost lifeless. I then only became aware of the nature of the case, and saw that nothing but a bold stroke of the knife could save the boy from immediate death. Pulling out the sponge, therefore, with one rapid incision I completely separated the upper edge of the tumour, so as to expose its cavity; and, directed by the warm gush of blood, immediately secured with my finger a large vessel at the upper corner, which, with open mouth, was pouring its contents into the sac. With my right hand, I then cleared away the coagula, and dissecting under my finger, separated the great subscapular artery, so that one of my assistants could pass an aneurism needle under it at its origin from the axillary, and about an inch from the sac. After tying this, and two other large vessels, (fully the size of the ulnar,) which supplied the sac, I dissected off the tumour from the ribs without further hæmorrhagy, cutting with my knife the carious scapula and under part of the sac. After removing the tumour, I found it necessary to saw off the ragged and spongy part of the scapula, so as to leave only about a fourth part of that bone, containing the glenoid cavity, processes, and half of the spine. In this way, ten muscles * were either wholly or partially divided. The edges of the wound were then brought together, and the patient cautiously lifted into bed. At this time he was pale, almost insensible, and without any perceptible pulsation in the greater arteries through the integuments, though the ends of the vessels in the wound beat very forcibly. By the exhibition of stimuli, externally and internally, his pulse could by-and-by be felt, though, on account of its quickness, it could not be counted. In the evening, however, it was at 90, and soft.

26th.—The wound is now completely filled up by healthy granulations, and contracting rapidly; discharge by no means profuse, nor has it been so; appetite good; pulse 80 and soft;

* Latissimus Dorsi—Trapezius—Deltoides—Rhomboides Major—Infra-spinatus—Supraspinatus—Subscapularis—Teres Major—Teres Minor—Serratus Magnus.

all the functions natural. On the 23d, (only eight days from the operation,) he was so well, as to be out of bed in the forenoon for a considerable time. In the course of eight or ten days, he has every prospect of being enabled to return home quite well, and with considerable power in his arm, of which the pain has entirely ceased. The only apparent cause for alarm now, is the chance of hæmorrhage at the separation of the ligature, as it was impossible to include the vessel at a distance from the disease. The artery, however, was apparently sound. Whatever may be the result, certainly no blame can attach, seeing that the case has so far proved completely successful.

The tumour, though possessing some of the characteristics of aneurism, is quite unique in many points. The sac is composed of bony matter, containing little earth, and arranged in strata of short fibres pointing to the cavity. Its outer surface is smooth, and covered by a very dense membrane, whereas the inner, to which so equable a resistance was not afforded, is studded with projecting spiculæ. The lower part of the scapula lies in the middle of the sac, partly absorbed and covered by coagula, and the remains of the muscles. It would appear, that as absorption had proceeded from the bone, deposition had taken place in the sac. Very large vessels are perceived running on the surface of the tumour. For a more minute account, I must refer to the explanation of the engraving, which is a very faithful representation of the diseased mass removed. I am not aware that any account of this disease has been given. In looking over my note-book, however, I find a memorandum of a preparation I had examined in one of the Glasgow museums, (if I am not mistaken, that of Professor Jeffrey,) where there was a bony sac, about the size of an orange, situated on the outer ankle, and connected with both bones. Many pretty large arteries opened into it, but the trunks of the three principal vessels are stated to be unconnected with the tumour. Neither am I acquainted with any case in which the scapula has been removed by the knife of the surgeon, though there are on record one or two instances of recovery, after it had been torn off by machinery. The success attendant on the case now related may encourage surgeons to perform even bolder operations on the superior extremity; and from their attention being directed to the subject, other cases of this singular disease may be discovered, and its nature more accurately ascertained.

P. S. Dec. 7.—The wound on M'Nair's shoulder has opened a little at the upper angle, but is granulating and filling up rapidly from the bottom, concealing the ligatures, which are still firm,

but have been cut off close by their attachment. His health is quite re-established, and he returns home to-day.

CASE II.

Popliteal Aneurism.

Sept. 30, 1819.—I was requested to see the subject of this case, PETER BARCLAY, a scaman, æt. 35, on account of an aneurism of the right ham. The tumour was not large, and had been noticed as the cause of lameness for three weeks, and was attributed to a sprain in raising a heavy cask in a ship's hold.

Oct. 1st.—I included the artery to day in a single ligature of small worked dentists' silk, leaving out the ends. After opening the sheath slightly with the point of my knife, considerable resistance was experienced in passing the aneurism needle behind the vessel. On this being overcome the wound was instantly filled with arterial blood. It was cleaned out repeatedly with the sponge and again filled. I then drew the ligature tight, when the bleeding totally ceased. It is probable that some branch had been divided as it comes off from the trunk by the point of the needle, which is as sharp as it can be made without a cutting edge, as my object has always been to detach the vessel no more than sufficient for the passage of the ligature. I was not so much concerned about the hæmorrhage as I should have been, had venous blood appeared, as I knew that I could easily remedy it by detaching the artery more, and applying two ligatures. I was present at one case, when, I believe, the femoral vein or a branch of it was wounded, and in which the sides of the opening were puckered up and tied, but very soon after the young man was carried off by bleeding. These cases should serve as cautions in the use of such a needle, which should be moved a little laterally if any resistance is felt. The incision was brought together by three stitches. Notwithstanding the delay occasioned by the hæmorrhagy, the whole operation, &c. did not occupy more than three minutes and a half. The ligature separated on the 22d day, though on the removal of it the wound could scarcely admit a pin's head. Eight days after the separation of the ligature, he had stretched the limb in getting out of bed, and considerable swelling about the wound supervened. Matter formed, which with a flow of blood came away suddenly in the night. From the idea that the artery had given way, he twisted a handkerchief round the limb with the handle of a spoon in lieu of tourniquet. I was the more alarmed at the idea of hæmorrhage in this stage of the case, as I had in one month witnessed the loss of two patients after the separation of the ligature. The first was a case of popliteal

aneurism, in which the artery had been secured by two ligatures and the vessel cut between. Ten days after their separation, when the wound was healed so as scarcely to admit a crow quill, bleeding came on in the middle of the night, and carried off the patient.

The other was a case in which the iliac was secured for inguinal aneurism by a single ligature. Eight days after its separation hæmorrhage began, and returned at intervals for four or five days till he died. No attempt was made to secure the bleeding vessel. In neither was examination of the parts allowed.

In the case in question, however, the wound healed up without further trouble, and the patient is moving about.

CASE III.

Popliteal Aneurism.

Oct. 5, 1819.—I was called to the country to operate on the limb of Mr T. æt. 30. Twelve months before, he had noticed a pulsating tumour in the left ham, producing lameness, which he attributed to a strain in lifting a heavy weight up a flight of steps. A very intelligent surgeon, Mr Young of Dalkeith, to whom he applied, perfectly aware of the nature of the case, suggested the propriety of an operation. This advice however he neglected, and put himself under the care of a kind of veterinary surgeon, who applied turpentine, poultices, &c. The swelling now attained a very large size, and lost all the characteristics of aneurism. A lancet was (on this date) pushed into the most prominent part, when, after the escape of a few coagula, florid blood made its appearance. The wound was secured by a firm compress bandage, and a tourniquet tightly applied to the limb by his former adviser, who called upon me. The tumour and knee measured about two feet in circumference, the limb was immensely swelled, and much pained; the patient thin and emaciated, but prepared to undergo any operation. Considering that the limb would be in a much more favourable state for the ligature of the vessel, owing to the already existing obstruction to the circulation, and consequent enlargement of the anastomosing vessels, than for amputation, which was proposed, (and in fact I have seen this latter operation performed on account of an aneurismal tumour in the ham of a much smaller size,) and also that the securing of the vessel, in the first instance, did not afterwards preclude, if necessary, the removal of the limb, I decided on making the experiment, and accordingly proceeded to include the femoral artery in a ligature, as in the former case. The patient suffered but little, as the lifting of him to the light, removal of the tourniquet, operation, dressing, and

replacing him in bed, were completed within eight minutes. The ligature separated on the 17th day. In three weeks both the wound in the tumour and that on the thigh were cicatrized. The tumour from the time of the operation diminished rapidly, is now almost gone, and the patient begins again to enjoy the use of his limb.

CASE IV.

Inguinal Aneurism.

Nov. 5, 1819.—Mr A. æt. 35, about five weeks ago, and after dancing, felt pain in the left groin, and rheumatic affection of the limb. Three weeks since, he noticed a swelling close to Poupart's ligament, which has gradually increased, and has now attained the size of a large lemon externally. It has been treated by an apothecary, who has applied blisters, &c. to the limb and tumour.

Next day, assisted by my friend, Dr Kellie, who had seen the case two days before, I secured with a single ligature the external iliac, as high as possible, by an incision almost parallel to the linea semilunaris. The different layers of muscles were divided by the knife, and with the hand unsupported, until the peritonæum was exposed by lifting a few fibres of the transversalis with the forceps. The wound was then dilated with a probe pointed bistoury, the peritonæum held aside, and the vessel tied. I am thus particular in mentioning the steps of the operation, as I know that the peritonæum has been wounded, and the viscera allowed to escape on the living body; indeed, I have seen such mistakes committed by those who ought to know better, in their attempts on the dead.

The patient bore the operation well; the ligature came away on the 16th day; and the wound is now (Nov. 25th) almost healed. He has complained much less of pain, or coldness of the limb, than the two former patients. By the operation, he was immediately relieved from excruciating pain, stretching down the fore part of the thigh, referable to the pressure on the anterior crural nerve. The tumour has already almost completely disappeared.

CASE V.

Curious Affection of the Head and Face, in which Ligature of the Left Carotid was had recourse to, but without success.

The following case I offer without any comment. The subject of it is still alive, and unrelieved; of course, I shall, with pleasure, attend to any suggestion regarding her. On June 20, 1817, I was requested by my particular friend, Mr Nasmyth, to see J. CAIRNS, æt. 24, in consultation with Drs Barclay,

Duncan junior, and himself. She had been afflicted with constant beating pain in the left cheek and upper jaw, along the alveolar processes, stretching to the throat, and, indeed, involving the whole head. The pain was without respite, and so violent, that she constantly supported her head, unable to use the slightest exertion, and sleeping only when completely exhausted. Of course, all kinds of remedies had been tried, external and internal. The antrum had been perforated eighteen months before, and that very extensively, by Mr N.; but neither matter nor tumour could be detected. At one period, this gentleman (thoroughly acquainted with the disorders of the mouth, &c.) thought that he had discovered the cause of all the mischief in a canine tooth, growing across the palate; but, after the extraction of this, no relief whatever was obtained. In my examination of the parts, finding no cause of irritation of any kind, I, partly for the sake of experiment, put my thumb on the left carotid. She immediately exclaimed, that she was quite relieved; and that, if the pressure were continued, she would be enabled to go about her usual occupation. The same effect was produced in the repeated trials of the gentlemen present. As every plan had failed, it was deemed, in consultation, quite justifiable to produce a permanent obstruction to the flow of blood in the artery. Accordingly, on the 22d, I passed a small single ligature under the vessel, immediately below the omo-hyoideus. Neither the vein nor the nerves produced any delay or difficulty in the operation, which was done in a very few minutes. The latter organs were separated, and the sheath opened with the point of the knife. I may here mention, that for an instant I gave up the dissection, after dividing the superficial parts, and tried, as is recommended by some surgeons, to separate the sheath, &c. with the handle of the knife. This plan, however, in any circumstances, I should never again be prevailed upon to attempt. Neither would I be inclined to use a directory for dividing the layers upon. In this, and every case since, I have uniformly made a fair and clean dissection of the parts, in any delicate step lifting the coverings with the common dissecting forceps. This instrument, from being more accustomed to its use, has always served me instead of a tenaculum, and in many cases of a directory also.

The wound was healed on the removal of the dressing, excepting where the ligature (which was separated on the 22d day) was left out. For some time, the pains were much relieved; but since then, I understand, they have returned with considerable violence. After the operation, she complained much of pain in

the back of the head and neck, probably from the dilatation of the vertebral arteries.

Edinburgh, 56, George Street, }
1819.

Explanation of the Plate.

Fig. I.

Is the representation of a sound scapula, much reduced, the dotted line on which, *a. b.*, marks out where the bone was sawn across after the removal of the tumour.

Fig. II.

Exhibits the inner surface of the sac, which pointed to the ribs. The figure is about a third of the original size.

a. a. a. The bony or cartilaginous sac, the fibres of which are seen pointing towards its centre.

b. The cavity, which was filled with fluid blood. The bony projections or spiculæ are seen, as it were, crystallized at this part.

c. Coagulum, evidently organized, embracing towards the letter

d. on the left, a portion of thin half-absorbed scapula.

d. On the right hand, is the sawn edge of the thick part of the bone. This letter, together with

e. f. marks out a portion of the scapula and sac, which has been placed in its situation to complete the appearance of the tumour, though it was sawn off separately, after the removal of the latter.

A number of pretty large pieces betwixt *e.* and *g.* were also cut off with the bone forceps.

g. Marks out the place where the subscapular artery entered the tumour.

h. The strong membrane covering the sac, with the fibres of the muscles attached to its outer surface.

The portion of cyst betwixt *h.* and *a.* was that which occupied the situation at the root of the acromion; and, when it was first opened,

g. on Fig. II. occupied nearly the situation of *a.* on Fig. I.

